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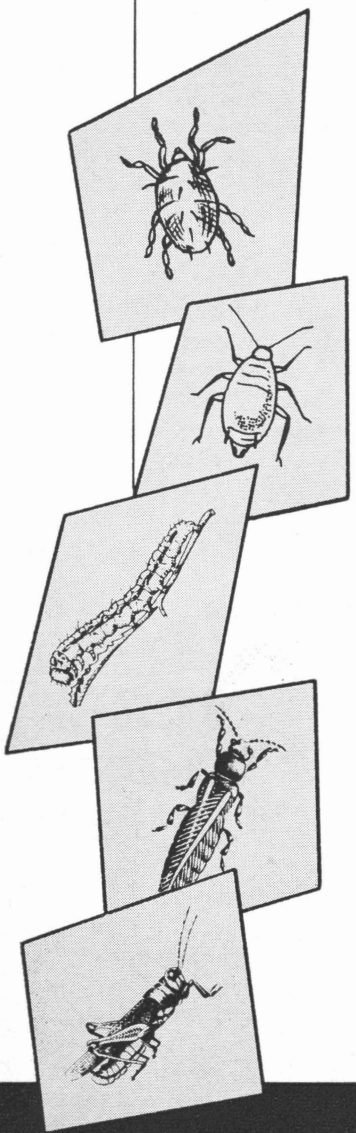
TEXAS GUIDE for CONTROLLING INSECTS



on Peanuts

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Texas Guide for Controlling Insects on Peanuts

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Many different insect pests attack peanuts. Varying factors such as weather and cultural practices cause insect problems to fluctuate from one season to the next. Because insect populations vary and economic levels of damage to peanuts have not been fully determined, producers should analyze the situation before beginning a control program. Land potential, anticipated yield, stage of plant growth, moisture conditions and insect species are important aspects to consider. Knowing when *not* to make applications often is as important as knowing *when* to begin them.

INSECT PESTS

Lesser Cornstalk Borer

The lesser cornstalk borer is the major insect pest of peanuts in Texas. This small, slender larva is primarily a subterranean feeder and lives beneath the soil surface in silken tubes. In peanut growing areas of South Texas, late-planted peanuts may be damaged in the seedling stage, resulting in a reduced stand. Serious injury results from the attack of the worms or larvae on mature plants. They feed principally on the pegs, pods, stems and roots. The pegs are cut off immediately below the surface of the ground, and the developing nuts are hollowed out. Stems and roots are scarred and may be girdled.

This insect is most severe on peanuts grown under dryland conditions or during drouth years. Rainfall, particularly in wet seasons, and irrigation in certain fields appears to contribute to the mortality of the larvae. The timing of irrigation applications or the amount of water applied at each irrigation may contribute to the differences in populations of larvae in certain irrigated fields. Damage can be reduced by keeping the land free of weeds and grass for several weeks prior to planting.

Best results through chemical control have been obtained when applications began as soon as full-grown larvae were observed in the soil. In areas where this pest persists, applications should begin as soon as moderate-to-heavy populations of small worms are observed. Insecticides should be applied to cover the lower stems and a band of soil 6 to 8 inches wide on each side of the row.

Thrips

These tiny insects feed primarily in the terminal leaf clusters between folds of the young leaflets by rasping the leaf surface and sucking up the plant juices. This results in dwarfing and malformation of the leaves, causing a condition often referred to as "pouts." Thrips feeding commonly occurs during the first month after plant emergence.

Spraying or a granular application of insecticides at the time of planting effectively controls the insects, but does not generally increase yields. Application of insecticides, however, produced noticeable improvements in foliar growth and appearance during the early growth period. Yield increases are dependent on the extent of thrips damage or population numbers and the stage of growth of the plant when damaged.

Foliage Feeding Insects

In some years, insects in the foliage feeding group cause considerable damage to peanuts. This group includes pests such as the corn earworm or cotton bollworm, red-necked peanutworm, armyworms, salt-marsh caterpillars and grasshoppers. Research on the control of foliage feeding pests indicates that the peanut plant is extremely tolerant to foliage loss. Physical removal of three-fourths of the foliage before bloom or half after blooms did not adversely affect yields or grades in irrigated peanuts. Research also indicates that removal of more than half of the foliage reduces the yield of dryland peanuts, and that defoliation late in the season may result in lowered yields on both dryland and irrigated acreages. Should chemical control measures become necessary, make applications when worms or grasshoppers are small. Frequent and careful field checks are important for economic control.

Minor Pests

Insects and mites, which are more sporadic in their appearance and often classed as minor pests, include spider mites, three-cornered alfalfa hoppers, leafhoppers, cutworms, armyworms, webworms, wireworms, white grubs, corn rootworms, leaf miners, flea beetles, stink bugs and lygus bugs. If these pests have inflicted economic losses in the past, or if large infestations develop, apply insecticides before extensive damage occurs.

CAUTIONS

1. Read the label on each pesticide container before each use. Follow instructions carefully; heed all caution and warning statements, and ob-

serve precautions concerning the avoidance of residues. Adhere strictly to all restrictions concerning the use of plant material as animal feed.

2. Keep pesticides in their original containers. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed or other material that may become harmful if contaminated.

3. Dispose of empty containers in the manner specified on the label. If disposal instructions are not printed on the label, burn the containers where smoke will not be a hazard, or bury them at least 18 inches deep in a place where water supplies will not be contaminated.

4. Parathion, disulfoton and phorate are extremely toxic to man and other warm-blooded animals. Apply with care and in strict accordance with instructions printed on the label.

5. Improper use of insecticides can result in poor insect control as well as condemnation of the crop. In using approved insecticides, it is also important not to exceed recommended maximum dosage levels and to allow the proper time interval between the last application and harvest.

POINTS ON APPLICATION

1. Make frequent and careful inspections of peanut fields. Begin applications before worms cause serious damage and while they are small. Small worms are easier to control.

2. Use any row-crop duster or sprayer that can be adjusted to desired row width and nozzles directed on the peanut plants. Insecticides should be applied to thoroughly cover the plant. Use hollow cone nozzles.

3. Calibrate application equipment accurately before starting application. Make periodic checks on calibration during the season.

4. Apply dusts when air is calm. Place dust nozzles on ground machines 4 to 6 inches above the plants. Apply 15 to 20 pounds of dust per acre in early season; however, 20 to 30 pounds per acre may be required for coverage in late season.

5. Apply insecticidal sprays when weather conditions are optimum to avoid drift to adjacent fields or crops. Some insecticides are destructive to honeybees. Prevent their destruction if possible, since bees help pollinate many agricultural crops.

6. Maintain accurate, detailed records of pesticide use to include such information as the dates of purchase and application, the type of equipment used, the weather conditions, the locations of each pesticide application and the rates applied.

Insect	Insecticides (Listed at random)	Rate (Pounds technical per acre)	Formulation	Remarks
Thrips	Disulfoton (Di-Syston)	1.0-2.0	granular	Apply disulfoton or phorate at planting time with granular applicator attached to planter. Place disulfoton on one or both sides of the seed in the seed furrow. Contact with the seed may result in reduced germination. Place phorate granules evenly in the seed furrow. Use low rate on light, sandy soils. Do not graze immature crops.
	Phorate (Thimet)	1.0	granular	
	DDT	1.0	spray or dust	Apply DDT, toxaphene, 2-1 or carbaryl soon after plants emerge, or as needed. Do not feed treated forage or graze dairy animals or animals being finished for slaughter where DDT or toxaphene were applied.
	Toxaphene	1.0-2.0	spray or dust	
	Toxaphene-DDT (2-1)	1.0-2.0	spray or dust	
	Carbaryl (Sevin)	1.5	spray or dust	No time limitation in using carbaryl. Carbaryl has caused slight burn on seedling peanuts and rapidly growing plants, but no yield losses have been observed.
Lesser cornstalk borer	DDT	2.0 1.5	granular spray	Apply DDT, parathion or diazinon granules in a 12-14 inch uniform band directly over row just prior to pegging. Work into top few inches of soil immediately. For spray applications of DDT, parathion or diazinon use two nozzles per row so that the lower stems and a 6-8 inch band of soil are covered on each side of the row. Begin treatment as soon as full grown larvae are observed in soil. Repeat applications at 3-4 week intervals as needed. Observe restrictions in use of DDT cited above under thrips.
	Parathion	2.0 0.5	granular spray	Do not use parathion within 15 days of harvest or grazing.
	Diazinon	2.0 0.5-1.0	granular spray	Do not feed diazinon treated hulls to livestock. Do not feed peanut hay to livestock within 60 days after diazinon treatment.
Foliage Feeders Armyworms Climbing cutworm Corn earworm Grasshoppers Leafhoppers Red-necked peanutworm Saltmarsh caterpillar Three-cornered alfalfa hopper Webworm	DDT	1.0-2.0	spray or dust	Make applications on soil for climbing cutworms late in the afternoon. Make regular and frequent inspections of peanut fields. Start applications before worms cause serious damage and while they are small. Small worms are easier to control.
	Toxaphene	1.0-2.0	spray or dust	
	Toxaphene-DDT (2-1)	2.0-3.0	spray or dust	
	Sevin	1.5	spray or dust	Use 4-2-1 or parathion only where obtaining control has been difficult.
	Toxaphene-DDT-Parathion (4-2-1)	2.0-3.0	spray	
	Parathion	0.5-1.0	spray	Observe restrictions in use of DDT, toxaphene, carbaryl and parathion given for thrips or lesser cornstalk borer.
Spider mites	Parathion	0.25-0.5	spray or dust	Observe restrictions under lesser cornstalk borer when using parathion or diazinon.
	Diazinon	0.5	spray or dust	
	Sulfur	20-25	dust	No time limitations when sulfur is applied.
White grubs Wireworms	Parathion	2.0	granular or spray	Generally a problem when peanuts follow grass sod. Make applications if white grubs or wireworms are observed when peanut land is turned. Apply prior to planting. Work into top 3 inches of soil. See restrictions under lesser cornstalk borer.
	Diazinon	2.0	granular or spray	

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